Dust and Odor Control Plan

Former ORP/Building 1 Area

Former Oakland Army Base—EDC Area

Oakland, California

Prepared For:

Oakland Base Reuse Authority
700 Murmansk Street, Suite 3
Oakland, California 94607

September 8, 2005

Prepared By:

Northgate Environmental Management, Inc.
300 Frank H. Ogawa Plaza, Suite 300
Oakland, California 94612

1147.01

Dust and Odor Control Plan

Former ORP/Building 1 Area
Former Oakland Army Base—EDC Area
Oakland, California

September 8, 2005

Prepared For:

Oakland Base Reuse Authority
700 Murmansk Street, Suite 3
Oakland, California 94607

Prepared By:

Northgate Environmental Management, Inc.
300 Frank H. Ogawa Plaza, Suite 510
Oakland, California 94612

Axel Rieke, E.I.T.
Project Engineer

Alan Leavitt, P.E.
Principal

TABLE OF CONTENTS

1.0 INTRODUCTION

This Dust and Odor Control Plan (DOCP) has been prepared by Northgate Environmental Management, Inc. (Northgate) on behalf of Pacific States Environmental Contractors, Inc. for the Oakland Base Reuse Authority (OBRA). The DOCP will be implemented to control dust and odor during demolition, excavation, stockpiling, soil treatment, and loading activities during remediation of the former Oil Reclaiming Plant (ORP)/Building 1 Area of the former Oakland Army Base—Economic Development Conveyance (EDC) Area (the Site). The Site location is shown on Figure 1.

This DOCP has been prepared to comply with the requirements for mitigation of dust and odors that are presented in the following documents:

- Mitigation Measures 4.4–1 and 4.4–2 of the *Final Environmental Impact Report for the Oakland Army Base Redevelopment Plan* (Final EIR) (City of Oakland, 2002);
- *Final Remedial Action Plan* (RAP) (Erler and Kalinowski [EKI], 2002a);
- *Final Risk Management Plan* (RMP) (EKI, 2002b);
- *Draft Remedial Design & Implementation Plan for the Former ORP/Building 1 Area, Former Oakland Army Base—EDC Area* (Draft RDIP) (EKI, 2004); and
- *Contract Documents for Former ORP/Building 1 Area Remediation Project* (Contract Documents) (EKI, 2005).

The mitigation measures described in this DOCP will be implemented and coordinated in a manner to comply with requirements in the following documents:

- *Decontamination Plan* (DP) (Northgate, 2005a);
- *Noise Reduction Plan* (NRP) (Northgate, 2005b).
- *Perimeter Air Monitoring Plan* (PAMP) (Northgate, 2005c);
- *Site-Specific Health and Safety Plan* (SSHSP) (Northgate, 2005d);
- *Soil Treatment Process Plan* (STPP) (Northgate, 2005e);
- *Storm Water Pollution Prevention Plan* (SWPPP) (Northgate, 2005f); and
- *Traffic Control and Transportation Plan* (TCTP) (Northgate, 2005g).

1.1 Background

The U.S. Department of Defense, Department of the Army (Army) demolished Building 1 in December 2002. Subsurface investigations by the Army and OBRA have found that a layer of spongy, black, tarry, organic material (referred to as tarry residue) and other oily wastes are present in the subsurface under portions of former Building 1, particularly Wings 1 and 2. The tarry residue is acidic and has the potential to generate sulfurous and/or nitrous gases according to the RAP (EKI, 2004a).

The following chemicals of concern (COCs) were reported to be present in soil, tarry residue, or other oily wastes at the former ORP/Building 1 Area:

- Lead and other metals;
- Total petroleum hydrocarbons (TPH);
- Polynuclear aromatic hydrocarbons (PAHs);
- Polychlorinated biphenyls (PCBs);
- Polychlorinated dibenzodioxins (PCDDs); and
- Polychlorinated dibenzofurans (PCDFs).

Low concentrations of volatile organic compounds (VOCs) also have been detected in soil at the former ORP/Building 1 Area.

1.2 Purpose of the DOCP

The objectives of the DOCP are to provide measures to control potential dust and odor emissions during remediation of the Site. The DOCP describes the control techniques, materials, and equipment to be used to mitigate potential dust and odor impacts resulting from the demolition, excavation, treatment, loading, and transport of wastes from the former ORP/Building 1 Area.

1.3 General Scope of Work

The primary tasks to be performed to remediate the former ORP/Building 1 Area for reuse will include the following tasks, in accordance with the Contract Documents (EKI, 2005):

1. Demolish pavement, slabs, foundations, and other surface and subsurface improvements within the planned excavation area;
2. Remove existing specified Site utilities;
3. Excavate chemically impacted soil;

4. Stockpile the excavated soil in separate stockpiles;
5. Collect and coordinate analysis of excavation sidewall confirmation and stockpile samples;
6. Treat Building 1 remediation waste to meet Alternate Treatment Standards (ATS), as defined in the Contract Documents (EKI, 2005);
7. Backfill the excavation;
8. Load, transport, and recycle or dispose of demolition debris and stockpiled soil; and
9. Restore Site utilities and paving.

1.4 Activities Covered by the DOCP

Dust and odor control measures specified in this document will be implemented during all demolition, earthwork, and construction activities for remediation of the former ORP/Building 1 Area, except as noted below. Dust generation may be associated with demolition and soil excavation activities, truck traffic, ambient wind traversing soil stockpiles, loading of transportation vehicles, soil treatment, and other earthwork.

Minimally intrusive or non-intrusive activities will not be subject to dust and odor control measures. These activities include surveying, locating utilities, collecting soil samples, and compaction testing.

2.0 KEY PERSONNEL/HEALTH AND SAFETY RESPONSIBILITIES

The planned remediation activities will involve the participation of personnel from the following firms:

- Pacific States Environmental Contractors, Inc. (Pacific States);
- Acumen Industrial Hygiene, Inc. (Acumen);
- Northgate Environmental Management, Inc. (Northgate);
- McGuire and Hester, Inc.;
- Gallagher and Burke, Inc.;
- Chrisp Company;
- Worldwide Land Surveys and Civil Engineering, Inc.;
- Vironex, Inc.;
- D and E Construction, Inc.;
- Tello and Son Maintenance, and
- Kuma Corporation.

The following list identifies the key health and safety personnel who are referred to in this DOCP and/or responsible for implementing the SSHP:

Project Manager:	*Keith Wayne (Pacific States)*
Certified Industrial Hygienist (CIH):	*Paul Spillane (Acumen)*
Site Safety Officer/Site Supervisor:	*Kevin Stonestreet (Pacific States)*

Table 1 provides a summary of the health and safety responsibilities and authorities of these key individuals.

3.0 DUST AND ODOR MITIGATION MEASURES

To reduce the risk of exposure to airborne materials that may contain elevated concentrations of lead or other COCs to workers at the Site and to the general public in areas adjacent to the Site, mitigation measures will be implemented to reduce the amount of dust and vapors generated at the site.

In addition, all work will be performed in compliance with applicable laws and regulations, including Bay Area Air Quality Management District (BAAQMD) requirements regarding emissions of dust, lead, hydrogen sulfide, and other odorous substances and nuisances.

If the Recommended Action Levels (RALs) are exceeded, or significant odors are detected at the Site perimeter air monitoring stations (defined in the PAMP [Northgate, 2005c] and below), OBRA's representative will be notified promptly. In this event, all dust or odor generating activities will immediately cease, and dust or odor control measures will be revised and implemented to the satisfaction of OBRA's representative before resuming work.

The Site perimeter air monitoring stations defined in the PAMP (Northgate, 2005c) are: (1) at the intersection of Bataan Avenue and Algiers Street; (2) at the intersection of Bataan Avenue and Corregidor Avenue; (3) at the intersection of Corregidor Avenue and Alaska Street; and (4) at the intersection of Alaska Street and Australia Street. Pacific States may modify these locations with authorization from the Client Representative based on meteorological conditions and type and location of work being conducted. The stations will be located so that monitoring can be performed in approximate upwind, downwind, and crosswind directions based on daily changes in the actual wind directions.

If, on any given day, soil excavation and loading activities are to be performed in close proximity to the expected downwind Site perimeter, one or more sampling stations will be moved along the downwind Site perimeter to be positioned at the nearest safe operating distance from the active work area.

3.1 Minimum Dust and Odor Control Requirements

In accordance with Mitigation Measures 4.4–1 and 4.4–2 of the Final EIR (City of Oakland, 2002), minimum dust and odor control techniques to be implemented at all times during work at the Site will include:

1. Limiting vehicle speeds on unpaved roads to 5 miles per hour (mph);

2. Misting or spraying water at least twice daily or when visible dust is present to prevent formation of dust while excavating unsaturated zone soil, transferring unsaturated zone soil on-Site, or loading transportation vehicles with unsaturated zone soil;
3. Covering all trucks hauling soil, sand, and other loose materials or requiring all trucks to maintain at least 2 feet of freeboard;
4. Paving, applying water at least three times daily, or applying (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas;
5. Sweeping daily (with water sweepers) all paved access roads, parking areas, and staging areas, as necessary, if visible soil material is present;
6. Sweeping public roadways daily (with water sweepers), as necessary, if visible soil material is carried onto adjacent public roadways;
7. Hydroseeding or applying (nontoxic) soil stabilizers to previously graded areas inactive for 10 days or more;
8. Installing sandbags and other erosion control measures to prevent silt runoff to public roadways;
9. Replanting vegetation in disturbed areas as quickly as possible;
10. Limiting the area subject to excavation, grading, and other construction activity at any one time and controlling excavation rates to minimize the generation of dust and odors;
11. Suspending excavation and grading activity when sustained wind speeds exceed 25 mph;
12. Removing loose soil from equipment and vehicles by dry brushing and washing residual dust or soil from the tires and tracks of equipment and vehicles, as necessary, prior to leaving the Site, in accordance with the DP (Northgate, 2005a);
13. Keeping the drop heights to a minimum while loading transportation vehicles; and
14. Enclosing, covering with weighted black plastic sheeting or tarps, watering twice daily, or applying (nontoxic) soil binders to exposed stockpiles.

3.2 Dust Control Performance Standards

The presence of lead and other hazardous substances detected at the Site present a potential health risk to on-site workers and off-site receptors. Dust and total airborne lead measurements will be conducted at the Site perimeter air monitoring stations using direct-reading dust monitors, high volume air sampling techniques, or other methods, in accordance with the PAMP (Northgate, 2005c).

The following performance standards for dust control will apply to the Site:

- Dust emissions will be controlled at all times during demolition, excavation, stockpiling, soil treatment, or loading activities.
- The RAL for airborne dust is 1,000 micrograms per cubic meter (µg/m^3). Dust concentrations at the Site perimeter air monitoring stations will be measured and recorded in accordance with the PAMP (Northgate, 2005c), and compared to this action level.
- The RAL for airborne lead at the Site perimeter is an incremental concentration of 1.9 µg/m^3 above the background concentration, as a 24-hour average. Airborne lead concentrations at the Site perimeter air monitoring stations will be measured and recorded in accordance with the PAMP (Northgate, 2005c), and compared to the above action level. The background lead concentration is estimated to be approximately 0.03 µg/m^3 (EKI, 2004).

3.3 Additional Dust Control Measures

Additional dust control techniques will be implemented if observations, measurements, or verified complaints by air pollution control authorities or nearby tenants indicate the need for more stringent dust control. These procedures could include the following:

- Operating a sprinkler or mist system adjacent to excavation and soil loading areas;
- Designating personnel with hoses or other watering equipment to supplement the sprinkler or misting measures;
- Increasing the magnitude and frequency of the dust control procedures;
- Adding a palliative to the dust control water;
- Stopping certain portions of the work;
- Using windscreens; and
- Enclosing loading operations.

3.4 Odor Control Performance Standards

Odorous soil and groundwater were encountered during previous environmental sampling at the Site. These observations indicate that hydrogen sulfide or other odorous materials may be present in soil and groundwater at the Site. Potential odors caused by gaseous or volatile compounds that may be encountered during excavation include hydrogen sulfide, sulfur dioxide, and VOCs. The safety procedures to be followed if hydrogen sulfide or other odorous and/or hazardous compounds are encountered during earthwork activities are presented in the SSHSP (Northgate, 2005d).

If hydrogen sulfide, sulfur dioxide, or other odorous compounds are identified during earthwork activities (see the SSHSP [Northgate, 2005d] and PAMP [Northgate, 2005c] for air monitoring requirements), the contractor and OBRA's representative will evaluate the most appropriate response on a case-by-case basis, in consultation with the Project CIH, Paul Spillane of Acumen (Section 2.0 and Table 1). If hydrogen sulfide, sulfur dioxide, VOCs, or other odorous compounds are measured in the Work Area in excess of Action Levels defined in the SSHSP (Northgate, 2005d), the level of personal protective equipment will be modified, as appropriate. Exposed soil that is the suspected source of odors will be covered immediately with temporary plastic sheeting and/or soil cover while modifying personal protective equipment.

3.4.1 Additional Odor Control Measures

If unacceptable airborne concentrations of hydrogen sulfide, sulfur dioxide, or VOCs persist, as determined by OBRA's representative, the Site Safety Officer, or the Project CIH, work in that area will be stopped and the odorous soil and excavation area will be immediately covered with temporary plastic sheeting and/or soil cover to prevent the continued release of odorous compounds. The contractor and OBRA's representative will then confer on appropriate additional odor control techniques to implement, in consultation with the Project CIH. Additional odor control techniques could include the following:

- Misting in the work area during excavation of potentially odorous soil using a proprietary odor control agent (discussed in Section 3.4.2, below);
- Applying vapor control media (discussed in Section 3.4.2, below) to the excavation subgrade and sidewalls and on the surface of soil contained in transportation vehicles or stockpiles;
- Covering transportation vehicles and stockpiles with tarps immediately after applying vapor suppressant foams and/or odor sealing compound; and
- Further limiting the soil excavation rate and size of the excavator bucket to reduce the potential for generating large pulses of airborne odorous compounds.

3.4.2 Odor Control Media

During all earthwork activities, the Contractor will maintain sufficient plastic sheeting on site to immediately cover the excavation and/or work area where odorous soil is present, if directed to do so by OBRA's representative, the Site Safety Officer, or the Project CIH. Additional temporary odor control media will be available at the Site within 24 hours of identifying odorous soil.

In addition to temporary soil cover (plastic sheeting and/or soil used as cover), odor control media may include a vapor suppressant agent and/or odor sealing compound such as:

- Rusmar AC-645™, 3M Light-Water ATC™, Kuma HydroSeal™, or an equivalent vapor suppressant odor control product; and/or
- A proprietary odor control agent such as Odex™ or comparable agents.

3.5 Exhaust Control Procedures

In accordance with Mitigation Measure 4.4–2 of the Final EIR (City of Oakland, 2002), exhaust control techniques to be implemented by the Contractor at the Site, where feasible, may include, but not be limited to, the following:

- Prohibiting truck idling in excess of 2 minutes;
- Using electricity from power poles rather than generators, if feasible.
- Limiting the size of construction equipment engines to the minimum practical size;
- Configuring construction equipment with 2- to 4-degree engine timing retard or pre-combustion chamber engines;
- Installing high-pressure injectors on diesel construction equipment;
- Installing soot traps;
- Installing catalytic oxidizers;
- Minimizing concurrent operation of vehicles; and
- If they are available in the air basin, purchasing emission offsets if reactive organic gas (ROG) or nitrogen oxides (NO_x) emissions from construction equipment exceed 6 tons per quarter.

Based on exhaust emission factors for construction equipment in guidelines issued by the BAAQMD (1999), the exhaust emissions for this project are estimated to be 0.6 ton of ROG and 2.8 tons of NO_x for approximately 60,000 cubic yards (yd^3) of earth moved. The total emissions for this project are estimated to be 3.4 tons over a period of approximately 2 months, and purchasing emission offsets will not be necessary.

4.0 REFERENCES

Bay Area Air Quality Management District, 1999, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans.*

City of Oakland, 2002, *Final Environmental Impact Report for the Oakland Army Base Redevelopment Plan.*

Erler and Kalinowski, Inc., 2002a, *Final Remedial Action Plan*.

Erler and Kalinowski, Inc., 2002b, *Final Risk Management Plan*.

Erler and Kalinowski, Inc., 2004, *Draft Remedial Design and Implementation Plan for the Former ORP/Building 1 Area, Former Oakland Army Base-EDC Area*.

Erler and Kalinowski, Inc., 2005, *Contract Documents for Former ORP/Building 1 Area Remediation Project*.

Northgate Environmental Management, Inc., 2005a, *Decontamination Plan.*

Northgate Environmental Management, Inc., 2005b, *Noise Reduction Plan.*

Northgate Environmental Management, Inc., 2005c, *Perimeter Air Monitoring Plan.*

Northgate Environmental Management, Inc., 2005d, *Site-Specific Health and Safety Plan.*

Northgate Environmental Management, Inc., 2005e, *Soil Treatment Process Plan.*

Northgate Environmental Management, Inc., 2005f, *Storm Water Pollution Prevention Plan.*

Northgate Environmental Management, Inc., 2005g, *Traffic Control and Transportation Plan.*

TABLE

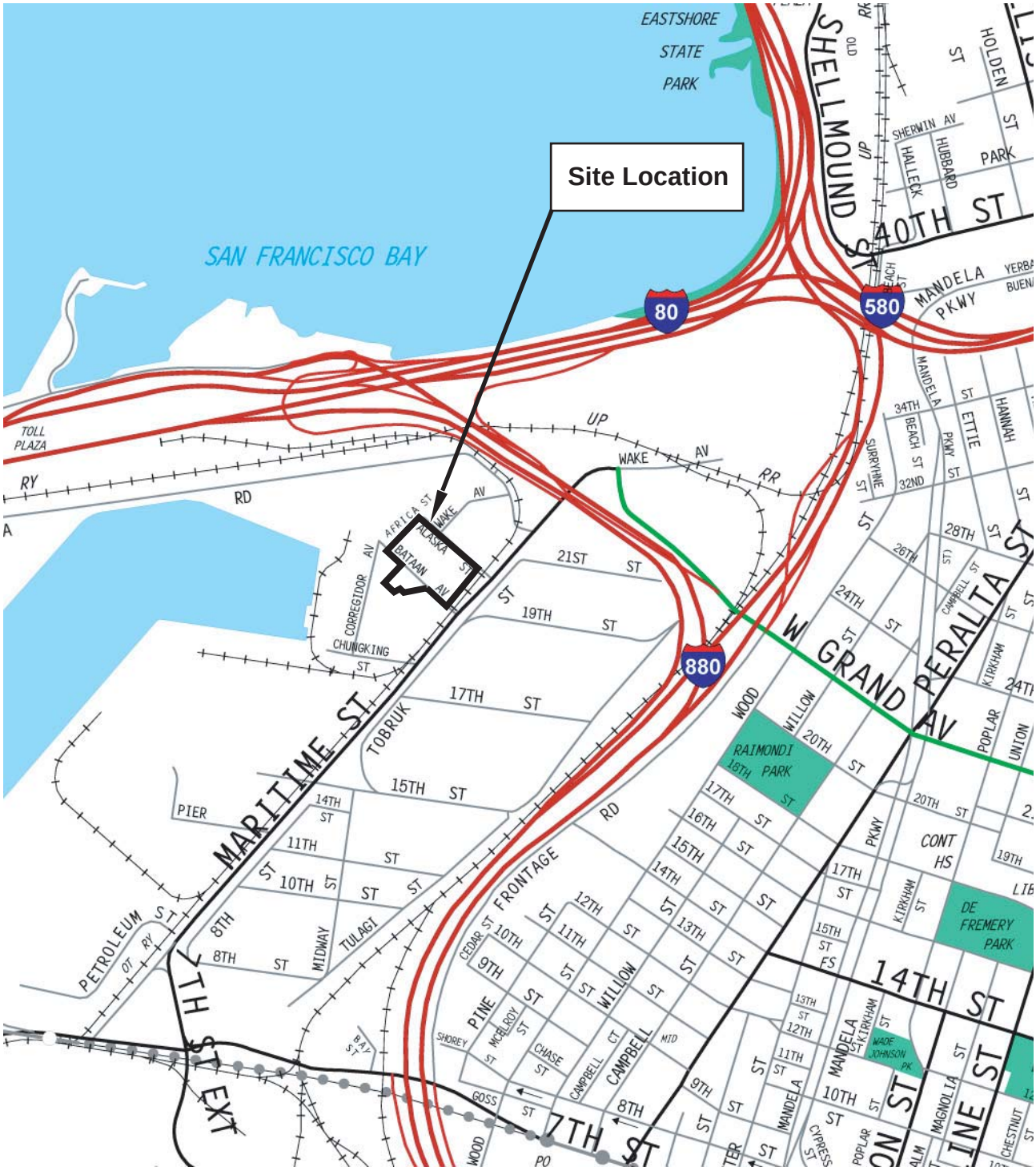
TABLE 1
Health and Safety Position Responsibilities
Former ORP/Building 1 Area
Former Oakland Army Base
Oakland, California

POSITION/PERSONNEL	RESPONSIBILITIES	AUTHORITIES
Project Manager	• Ensure the project is performed in such a manner consistent with the Pacific States Health and Safety program. • Ensure the project Site-Specific Health and Safety Plan (SSHSP) is prepared, approved, and properly implemented. • Coordinate with the Certified Industrial Hygienist (CIH) and project team members on health and safety activities.	• Assign CIH to project and if needed, an appropriately qualified replacement. • Suspend field activities if health and safety of personnel are endangered, pending an evaluation by the CIH. • Suspend an individual from field activities for infractions of the SSHSP, pending an evaluation by the Site Safety Officer (SSO) and/or the CIH.
Certified Industrial Hygienist (CIH)	• Audit key aspects of the SSHSP. • Provide leadership for the occupational safety and hygiene of personnel. • Investigate reports of incidents or accidents. • Develop or review, approve/disapprove of all project health and safety plans.	• Approve the health and safety qualifications of employees. • Approve/disapprove of project health and safety plans. • Suspend work on any project that jeopardizes the health and safety of personnel. • Assign SSO(s) to project and if needed, an appropriately qualified replacement. • Assign suitably qualified replacement for CIH, if needed.
Site Supervisor	• Administer the health and safety program at the site and provide recommendations for improvements to the program. • Maintain a working understanding of key health and safety regulations and Pacific State's health and safety policies. • Interface with Project Manager in health and safety matters. • Report to the CIH on health and safety issues. • Conduct staff orientations on health and safety related activities at the site. • Monitor compliance with the SSHSP and conduct site audits. • Respond to employee questions/concerns regarding health and safety.	• Suspend work or otherwise limit exposure to personnel if health and safety risks are unacceptable. • Direct personnel to change work practices if existing procedures are deemed to be hazardous to the health and safety of personnel. • Suspend and/or remove personnel from the project if their actions or physical condition endangers their health and safety or that of any other employee/co-worker. • Suspend work on any project that jeopardizes the health and safety of personnel.

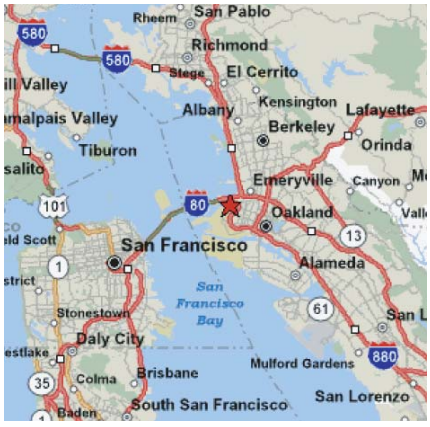
TABLE 1
Health and Safety Position Responsibilities
Former Oakland Army Base, Oakland, California

POSITION / PERSONNEL	RESPONSIBILITIES	AUTHORITIES
Site Safety Officer (SSO)	• Direct health and safety activities on-site. • Immediately report all safety-related incidents or accidents to the CIH and Site Supervisor. • Assist in all aspects of implementing the SSHSP. • Confirm with emergency medical facility that emergency procedures are defined, including access of medical transport to job sites and secured areas. • Coordinate and implement emergency procedures, as required. • Review certifications and medical surveillance status of all personnel prior to site access. • Maintain health and safety equipment on-site. • Conduct the review and acceptance of the SSHSP by all personnel. • Conduct and document daily health and safety briefings. • Maintain all site-related health and safety documentation and forms.	• Temporarily suspend field activities if health and safety of personnel is endangered, pending further consideration by the CIH. • Temporarily suspend an individual/employee from field activities for infractions of the SSHSP, pending an evaluation by the CIH and/or Site Supervisor.

FIGURE



APPROXIMATE LOCATION
NOT TO SCALE



Basemap from Thomas Guide, California, 2004

FIGURE 1
Site Location Map

Former ORP/Building 1 Area
Former Oakland Army Base
Oakland, California
September 2005
Project No. 1147.01

northgate
environmental management, inc.

northgate
environmental management, inc.

August 24, 2005 *Project No. 1147.01*

Mr. Andrew Clough
Environmental Manager
Oakland Base Reuse Authority
700 Murmansk Street, Suite 3
Oakland, California 94607

Re: Response to DTSC's August 17, 2005 Letter
Dust and Odor Control Plan
Former Oil Reclaiming Plant (ORP)/Building 1 Area
Former Oakland Army Base—Economic Development Conveyance Area
Oakland, California

Dear Mr. Clough:

On behalf of the Oakland Base Reuse Authority (OBRA), Northgate Environmental Management, Inc., (Northgate) has prepared these comments in response to the above referenced correspondence, from Henry Wong, Remedial Project Manager, Office of Military Facilities, Department of Toxic Substances Control (DTSC), dated August 17, 2005.

1. Page 5, first bullet: The DOCP indicates that vehicle speeds on unpaved roads would be limited to 15 miles per hour. The draft Remedial Design and Implementation Plan for the Building 1 Area, page 2-7, specifies vehicle speeds on site would be kept below 5 miles per hour. Please revise the DOCP accordingly.

Response to Comment No. 1.

The DOCP has been revised in accordance with the above comment.

2. Page 6, eleventh bullet: Please define the acronym "DP" before its use.

Response to Comment No. 2.

We have revised the document to define the acronym "DP" prior to its use.

If you should have any questions regarding the above-referenced response to comments on the *Dust and Odor Control Plan, Former Oil Reclaiming Plant(ORP)/Building 1 Area, Former Oakland Army Base—Economic Development Conveyance Area, Oakland, California*, please contact me at (510) 839-0688.

Sincerely,
Northgate Environmental Management, Inc.

Alan Leavitt, P.E.
Principal

Distribution:

Henry Wong
Remedial Project Manager
Office of Military Facilities
Department of Toxic Substances Control
California Environmental Protection Agency
700 Heinz Avenue
Berkeley, California 94710

Mr. Michael T. Steiger
Project Manager
Erler & Kalinowski, Incorporated
1870 Ogden Drive
Burlingame, California 94010

Ms. Diane Heinze
Associate Environmental Scientist
Port of Oakland
P.O. Box 2064
Oakland, California 94604-2064

Mr. Jim Carolan
Senior Geologist
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612

Ms. Xuan-Mai Tran
Remedial Project Manager
U.S. Environmental Protection Agency - Region IX
Federal Facilities Cleanup Branch
75 Hawthorne Street, (SFD-8-2)
San Francisco, California 94105

Ms. Adriana Constantinescu
Project Manager
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Mr. Roger Caswell
BRAC Environmental Coordinator
DA BRACO AFO (OARB BEC)
BRAC Transition Office
700 Murmansk Street, Suite 3
Oakland, California 94607